## I CLAIM:

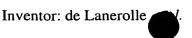
- 1. A Nuclear Myosin I β protein comprising a 16 amino acid N-terminal extension added to a cytoplasmic Myosin I protein amino acid sequence.
  - The Nuclear Myosin I  $\beta$  protein of claim 1 wherein the amino acid 2.

5	sequence com	prises:		
	mryrasalgs	dgvrvtmesa	ltardrvgvq	dfvllenfts
	eaafienlrr	rfrenliyty	igpvlvsvnp	yrdlqiysrq
	hmeryrgvsf	yevpphlfav	adtvyralrt	errdqavmis
	gesgagktea	tkrllqfyae	tcpapergga	vrdrllqsnp
10	vleafgnakt	lrndnssrfg	kymdvqfdfk	gapvgghils
	ylleksrvvh	qnhgernfhv	fyqlleggee	etlrrlgler
	npqsylylvk	gqcakvssin	dksdwkvmrk	alsvidfted
	evedllsiva	svlhlgnihf	\aadedsnaqv	ttenqlkylt
	rllgvegttl	realthrkii	kgeellspl	nleqaayard
$\rangle^{15}$	alakavysrt	ftwlvrkinr	skaskdaesp	swrsttvlgl
,	ldiygfevfq	hnsfeqfcin	ycheklqqlf	ieltlkseqe
	eyeaegiawe	pvqyfnnkii	cdlveekfkg	iisildeecl
	rpgeatdltf	lekledtvkp	hphflthkla	dqktrksldr
	gefrllhyag	evtysvtgfl	dknndllfrn	lketmcssmn
20	pimaqcfdks	elsdkkrpet	vatqfkmsll	qlveilrske
	payircikpn	dakqpgrfde	vlirhqvkyl	glmenlrvrr
	agfayrrkye	aflqrykslc	petwpmwagr	pqdgvavlvr
	hlgykpeeyk	mgrtkifirf	pktlfateds	levrrqslat
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25	rkwaaqtirr	lirgfilrhs	prcpenaffl \	dhvrasflln
	lrrqlprnvl	dtswptpppa	lreasellre	lcmknmvwky
	crsispewkq	qlqqkavase	ifkgkkdnyp \	qsvprlfist
	rlgteeispr	vlqslgsepi	qyavpvvkyd	kgykprprq
	llltpsavvi	vedakvkqri	dyanltgisv	ssisdsifvi
30	hvqrednkqk	gdvvlqsdhv	ietltktals	adrvnninin
	qgsitfaggp	grdgiidfts	gsellitkak	nghlavvapr
	lnsr.			

ctcagcatcg

841

gtccgtcatt





3. An oligonucle tide sequence encoding the Nuclear Myosin I  $\beta$  of claim 1.

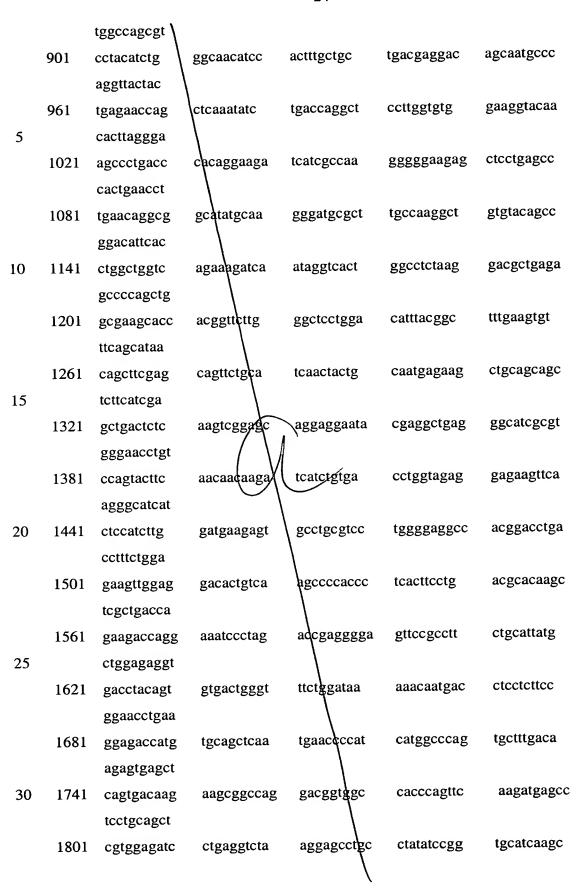
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claim 1. A cDNA molecule with the following nucleotide sequence: 4. gccgggtcdg ctaccgggca tcggccctgg 1 ggagcggggc gcaggatgcg 5 gcagtgacgg 61 gcgccttgac tgcccgagac cgggtagggg ggttcgagtg accatggaga tgcaggactt 121 gagaatttca tgccttcatt gagaacctcc ccagtgaggc tgtcctgctg ggcggcggtt tcctgtccta gtctctgtca 10 181 ctcatttata ectacategg ccgggagaac atccctaccg 241 ggaacgctac cgtggtgtca atctacagcc ggcagcatat agacctacag gtttctatga 301 cactgtatac cgggcacttc cagtggctga agtaccacct catttgtttg 15 gtactgagcg 361 tttctggaga gagtggggca ggcaagacag gcagtgatga tcgggaccag aggccaccaa cagagacctg 421 cccagcccct gaacggggtg gagactgctc cagttctatg gcgcagtgcg 481 agaggccttt gggaatgcca 20 agaccgcctg ttgcagagca accccgtgtt agactctccg 541 ttggaaagta\ catggatgtg cagtttgact caacgataac tccagccggt tcaagggtgc 601 tcagttacct cctggaaaag tcccgggtgg ggccacattc ccccgtggga 25 tgcaccaaaa 661 acgtctttta ccagctactg gaggggggcg cggaacttcc tcacggagag aggaggagac 721 ccagagctac ttgtacctgg aacggaaccc ctgggcttgg tctccgtcgg tgaagggcca 30 781 gtctcctcca tcaacgacaa gagtgactgg aaggttatga gtgtgccaag ggaaggcgct

gacttcactg

aggatgaagt

ggaggacttg

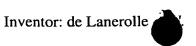






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1861 1921 1981 2041	caaacgacgc caagcagccg acctgggact gatggagaat atgaggcttt cctgcagagg gacggccca	ggtcgctttg ctgcgcgtgc tacaagtcac	atgaggtgct gcagagctgg	catecgacat	caggtgaagt cgtcgcaaat
1921 1981	acctgggact gatggagaat atgaggcttt cctgcagagg	ctgcgcgtgc	gcagagctgg		
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	cctgcagagg	tacaagtcac			
	1	tacaagtcac		~aaataaaa	otataaacaa
2041	gacggcccca /		tgtgcccaga	gacatggccc	atgtgggcag
2041		tattaa	tengagaget	caactacaaa	ccagaagagt
	1	gccgigiigg	icagacacci	eggetaeaag	conguagage
2101		btetteatee	gattececaa	gaccttattt	gccacagagg
2101		Alcticatec	ganceceda	Succession	8
2161		cagagtetag	ccaccaagat	ccaggcggcc	tggaggggct
2101		75.5	<i>8</i>		
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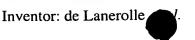


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	3601	ttcttggcca	accettcett	attcccttgt	ctgcctgtcc	atccacctgc
22	244	accttttag				
30	3661	cca.		<b>\</b>	d	

5. A peptide comprising an amino acid sequence MRYRASALGSDGVRVT.

Sub A2



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- 6. A cDNA molecule encoding the peptide of claim 4.
- 7. The peptide of claim 5 comprising an epitope with the amino acid sequence FLAG.
  - 8. An antibody directed to the Nuclear Myosin I β protein of claim 2.
- 9. An antibody directed to the peptide of claim 4.
  - 10. The antibody of claim 7, wherein the antibody is a monoclonal antibody.
    - 11. An antibody directed to the peptide of claim 7.
    - 12. A functional complex formed between one RNA polymerase II.
- 10 13. A method for inhibiting cell proliferation, said method comprising:
  - (a) obtaining at least one antibody to the peptide of claim 5; and
  - (b) administering the antibody to an organism so that the antibody contacts cells.
  - 14. The method of claim 13 wherein the antibody is a monoclonal
- 15 antibody.

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- 15. The method of claim 13 wherein the antibody is a synthetic compound.
- 16. A method for inhibiting cell proliferation, said method comprising
  - a) obtaining an antisense oligonucleotide to the cDNA of claim 3;
  - (b) contacting the cDNA with the antisense oligonucleotide to prevent expression of the cDNA and reduce cell proliferation.
- 17. A method for screening a candidate agent that inhibits transcription, said screening method comprising the antibodies in claim 9.
  - (a) providing proliferating cells;
  - (b) contacting the cells with the candidate agent;
- 25 (c) determining whether nuclear myosin I  $\beta$  (MNI  $\beta$ ) is translocated to the nucleus of the cells; and
  - (d) inferring that the candidate agent is an inhibitor of cell proliferation if NMI  $\beta$  is not detected in the cells nucleus.